

mapsAndNavigationPage

Map and Navigation Page This document aims to define the functionality and structure required to develop a Map and Navigation Page in a web application. The Map and Navigation Page integrates map functionalities and provides users with navigation features.

Overview ■ The Map and Navigation Page serves as a platform for users to interact with maps, view locations, get directions, and utilize navigation functionalities within the application.

Components ■ The Map and Navigation Page will consist of the following components:

- MapDisplayComponent** ■ Displays an interactive map interface using a mapping library (e.g., Google Maps, Mapbox). Shows geographical locations, markers, and provides navigation controls.
- LocationSearchComponent** ■ Includes a search bar or input field allowing users to search for specific locations or addresses on the map.
- DirectionsComponent** ■ Provides functionalities for users to get directions from one location to another. Offers options for selecting transportation modes (e.g., driving, walking, public transit).
- MapNavigationPageComponent** ■ Acts as the main container, rendering MapDisplayComponent, LocationSearchComponent, DirectionsComponent, and other relevant components. Manages the layout, interactions, and data flow within the Map and Navigation Page.

Functionality: ■ **Display Map and Locations** ■ Renders an interactive map allowing users to view geographical locations, markers, and navigation controls.

Location Search ■ Enables users to search for specific locations or addresses and displays them on the map.

Get Directions ■ Provides functionalities for users to get directions from one location to another. Displays route options, distances, estimated travel times, and turn-by-turn navigation.

Testing: ■ Conducts unit tests for each component and functionality. Ensures accurate display and functionality of the map, location search, directions, and navigation features. Verifies responsiveness and smooth interactions within the Map and Navigation Page.

Future Enhancements: ■ Implement real-time traffic updates and alternate route suggestions. Introduce geolocation services for current user location identification. Include additional map layers or overlays for enhanced information display.

Conclusion: ■ The Map and Navigation Page provides users with an interactive and user-friendly interface to explore maps, search for locations, get directions, and utilize navigation features within the application.